

In the Claims

CLAIMS

Claims 1-44 (Canceled).

45. (New) A semiconductor construction, comprising:

a semiconductive material substrate, the substrate having an upper surface; a first layer over the upper surface of the substrate, the first layer comprising polysilicon doped to a concentration of greater than 1×10^{19} atoms/cm³ with conductive-enhancing dopant, the first layer being patterned as a portion of a conductive line;

a second layer over and physically against the first layer, the second layer comprising silicide doped to a concentration of greater than 1×10^{18} atoms/cm³ with conductive-enhancing dopant, the second layer being patterned as a portion of the conductive line, the conductive line comprising the first and second layers having a pair of opposing lateral edges;

a pair of conductively-doped diffusion regions extending into the substrate beside the lateral edges of the conductive line, the conductively doped diffusion regions having a upper surfaces corresponding to the upper surface of the substrate; and

a silicon dioxide layer over and physically against the second layer and no silicon dioxide layer being over and physically against the upper surfaces of the conductively-doped diffusion regions, the silicon dioxide layer being formed by oxidizing an upper surface of the second layer during rapid thermal processing of the second layer.

46. (New) The construction of claim 45 wherein the silicon dioxide layer being formed by the rapid thermal processing comprises ramping a temperature at greater than about 7°C/second.

47. (New) The construction of claim 45 wherein the silicon dioxide layer being formed by the rapid thermal processing comprises ramping a temperature to exceed 850°C and maintaining the temperature above 850°C for at least 10 seconds.

48. (New) The construction of claim 45 wherein the second layer being doped comprises out-diffusion of conductive-enhancing dopant from the first layer into the second layer.

49. (New) The construction of claim 45 wherein the silicon dioxide layer being formed by oxidizing the second layer comprises exposing the second layer to an atmosphere having at least one compound selected from the group consisting of O₂, O₃, N₂O and NO.

50. (New) The construction of claim 45 wherein the silicide of the second layer comprises tantalum.

51. (New) The construction of claim 45 wherein the conductive-enhancing dopant for the second layer comprises a group III or a group V element other than boron, phosphorous and arsenic.

52. (New) The construction of claim 45 wherein the silicide of the second layer comprises cobalt.

53. (New) The construction of claim 45 wherein the silicon dioxide layer comprises a dopant barrier layer.

54. (New) The construction of claim 45 wherein the silicon dioxide layer comprises a thickness less than half a thickness of the second layer.

55. (New) A semiconductor construction, comprising:

a semiconductive material substrate, the substrate having an upper surface and having oxide isolation regions supported thereby;

a first layer over the upper surface of the substrate, the first layer comprising polysilicon doped to a concentration of greater than 1×10^{19} atoms/cm³ with conductive-enhancing dopant;

a second layer over and physically against the first layer, the second layer comprising silicide doped to a concentration of greater than 1×10^{18} atoms/cm³ with conductive-enhancing dopant, the conductive-enhancing dopant for the second layer comprises a group III or a group V element other than boron, phosphorous and arsenic;

a silicon dioxide layer over and physically against the second layer; and

wherein the silicon dioxide layer, second layer and first layer together are an expanse extending over the substrate and over the oxide isolation regions.

56. (New) The construction of claim 55 wherein the silicon dioxide layer is formed by oxidizing an upper surface of the second layer during rapid thermal processing of the second layer.

57. (New) The construction of claim 56 wherein the silicon dioxide layer being formed by the rapid thermal processing comprises ramping a temperature at greater than about 7°C/second to exceed 850°C and maintaining the temperature above 850°C for at least 10 seconds.

58. (New) The construction of claim 55 wherein the silicon dioxide layer comprises a thickness less than half a thickness of the second layer.

59. (New) The construction of claim 55 wherein the second layer being doped comprises out-diffusion of conductive-enhancing dopant from the first layer into the second layer.

60. (New) The construction of claim 55 wherein the silicon dioxide layer comprises a dopant barrier layer.

61. (New) A semiconductor construction, comprising:
a semiconductive material substrate, the substrate having an upper surface;
a first layer over the upper surface of the substrate, the first layer comprising polysilicon doped to a concentration of greater than 1×10^{19} atoms/cm³ with conductive-enhancing dopant;
a second layer over and physically against the first layer, the second layer comprising silicide doped to a concentration of greater than 1×10^{18} atoms/cm³ with conductive-enhancing dopant; and
an oxide layer over and physically against the second layer, the oxide layer comprising a thickness less than half a thickness of the second layer.

62. (New) The construction of claim 61 wherein the oxide layer comprises silicon dioxide.

63. (New) The construction of claim 61 Wherein the oxide layer is formed by oxidizing an upper surface of the second layer during rapid thermal processing of the second layer.

64. (New) The construction of claim 63 wherein the oxide layer being formed by the rapid thermal processing comprises ramping a temperature at greater than about 7°C/second to exceed 850°C and maintaining the temperature above 850°C for at least 10 seconds.

65. (New) The construction of claim 61 wherein the second layer being doped comprises out-diffusion of conductive-enhancing dopant from the first layer into the second layer.

66. (New) The construction of claim 61 wherein the conductive-enhancing dopant for the second layer comprises a group III or a group V element other than boron, phosphorous and arsenic.